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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,412	12/21/2001	Santhi E. Mathew	105690.125	2727

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BOSTON, MA 02109

EXAMINER

ELLINGTON, ALANDRA

ART UNIT PAPER NUMBER

2855

DATE MAILED: 10/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/027,412

Applicant(s)

MATHEW ET AL.

Examiner

Alandra N Ellington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,7,9-13,16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4-6,8,12-15 and 18-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other: \_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to because:
  - A. It is unclear as to what "electrode 130" is referring to.
  - B. "Electrode 120" and "parallel plate capacitor 138" in Fig. 3 are referring to the same element.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because it contains more than 150 words. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

3. Claims 12-15 are objected to because of the following informalities: Claims 12-15 are duplicate claims of claims 3-6. Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 9-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Tada et al (4,815,324).

With respect to Claim 1, Tada et al discloses a pressure transducer assembly, comprising: a pressure transducer 18, the transducer 18 generating a first output signal representative of a sensed pressure; a shaping circuit 17, the circuit 17 generating a second output signal, the second output signal being generated according to a first function of the first output signal when the first output signal is less than a first value, the second output signal being generated according to a second function of the first output signal when the first output signal is greater than a second value, the first function being different than the second function (col. 4 lines 1-42 {Figs. 2(a,c-d)}).

With respect to Claim 2, Tada et al discloses the pressure transducer assembly of claim 1, wherein the first function is a linear function and the second function is a linear function ({Figs. 2(c-d)}).

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With respect to Claims 3 and 12, Tada et al discloses the pressure transducer assembly of claim 2, wherein the first function is characterized by a first slope and the second function is characterized by a second slope, wherein the first slope is greater than the second slope {Figs. 2(c-d)}.

With respect to Claims 9 and 13, Tada et al discloses the pressure transducer assembly of claim 1, wherein the range of the first output signal is the same as the range of the second output signal ({Figs. 2(c-d)}).

With respect to Claim 10, Tada et al discloses a method of generating an output signal for a pressure transducer, the method comprising generating the output signal according to a first function of a sensed pressure when the sensed pressure is less than a first value and generating the output signal according to a second function of the sensed pressure when the sensed pressure is greater than a second value, the second function being different than the first function (col. 4 lines 25-42 {Figs. 2(c-d)}).

With respect to Claim 11, Tada et al discloses the method of claim 10, wherein the first function is a linear function and the second function is a linear function ({Figs. 2(c-d)}).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tada et al (4,815,324) in view of the acknowledged prior art.

With respect to Claim 7, Tada et al discloses the claimed invention except for the first output signal being at approximately 10% of a total sensed pressure range of the pressure transducer. The acknowledged prior art teaches a pressure transducer assembly having an output signal being at approximately 10% of a total sensed pressure range of a pressure transducer (pg. 5 lines 2-3). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Tada et al with the teachings of the acknowledged prior art to include the first output signal being at approximately 10% of a total sensed pressure range of the pressure transducer for the purpose of operating the pressure transducer within a desired operating range in order to receive accurate measurements without comprising system requirements (instant specification, pg. 4 lines 5-20).

6. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tada et al (4,815,324) in view Denner (5,911,162).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject

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matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(l)(1) and § 706.02(l)(2).

With respect to Claim 16, Tada et al discloses a pressure transducer assembly with a pressure transducer 18 producing a first output signal, the first output signal being substantially linear; and a shaping electrical circuit 17 producing a shaped output signal that is a function of the first output signal, the function being characterized by at least two slopes, the electrical circuit comprising a first amplifier stage 19 for generating a shaping function (col. 4 lines 1-42 {Figs. 2(a,c-d)}). However, Tada et al does not specifically teach a capacitive pressure transducer. Denner discloses a capacitive pressure transducer 100 ({Fig. 1A}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Tada et al with the teachings Denner to include a capacitive pressure transducer for the purpose of physically sensing pressure being measured and to produce electrical output signals of the sensed pressure.

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With respect to Claim 17, Tada et al discloses the shaping function with a first slope and a second slope that are different ({Figs. 2(c-d)}).

***Allowable Subject Matter***

7. Claims 4-6, 8 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Katou et al (6,340,929 B1) discloses a transmitter and external controller of tire inflation pressure monitor.

B. Kremidas (5,155,653) discloses a capacitive pressure sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra N.Ellington whose telephone number is (703)305-4449. The examiner can normally be reached on Monday - Friday, 6:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (703)305-4816. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.




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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

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Art Unit 2855



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